

WHAT IS CLAIMED IS:

1. A fabrication method of semiconductor device comprising a step of forming an electroconductive material film on a substrate, a step of polishing the electroconductive material film, and a step of washing a polished surface of said electroconductive material film,

wherein said washing step is a step of carrying out ultrasonic washing with a washing solution to which an ultrasonic wave is applied, prior to physical washing.

2. A fabrication method of semiconductor device according to Claim 1, wherein said polishing step is carried out by use of CMP (Chemical Mechanical Polishing).

3. A fabrication method of semiconductor device according to Claim 1, wherein said ultrasonic washing is carried out in a frequency band of not less than 800 kHz.

4. A fabrication method of semiconductor device according to Claim 3, wherein said frequency band is a range of 1 MHz to 3 MHz both inclusive.

5. A fabrication method of semiconductor device

according to Claim 1, wherein said ultrasonic washing is carried out while said washing solution is discharged from a nozzle.

5           6. A fabrication method of semiconductor device according to Claim 1, wherein said ultrasonic washing is carried out while the substrate with said polished surface thereon is rotated at 1000-2500 rpm.

10           7. A fabrication method of semiconductor device according to Claim 1, wherein said physical washing is selected from brush scrubbing and high-pressure jet washing.

15           8. A fabrication method of semiconductor device according to Claim 7, wherein said brush scrubbing is carried out using either a mohair brush or a sponge brush.

20           9. A fabrication method of semiconductor device according to Claim 8, wherein PVA (polyvinyl alcohol) is used for said sponge.

25           10. A fabrication method of semiconductor device according to Claim 1, wherein ultrasonic washing is again carried out after said physical washing.

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